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EXAMINER	
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CURTIS A. RICHARDSON
and KARL J. HALTINER, JR.

Appeal 2008-1653
Application 10/607,603
Technology Center 1700

Decided: February 29, 2008

Before EDWARD C. KIMLIN, CATHERINE Q. TIMM,
and LINDA M. GAUDETTE, Administrative Patent Judges.

KIMLIN, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 5-7. Claim 5 is illustrative:

5. A fuel cell assembly comprising,

first and second components in spaced, parallel relationship, and

a gasket disposed between said first and second components, said gasket being formed of first and second sheet metal elements and including

a planar region having an opening therein for passage of gas between said first and second components, said first and second sheet metal elements being bonded at said planar region, and

a pillow structure surrounding said opening and extending from said planar region, said pillow structure defining a gas-filled chamber enclosed with said first and second sheet metal elements and being diffusion bonded to said first and second components to form a sealed joint therebetween.

The Examiner relies upon the following references as evidence of obviousness:

Uchida (JP '783)(as translated)	JP 06096783	Apr. 8, 1994
Nagai (as translated)	WO 01/170048 Al	Mar. 8, 2001
Wakamatsu	6,231,053 B1	May 15, 2001
Inagaki	US 2003/0150162 A1	Aug. 14, 2003
Franklin	US 2004/0053099 A1	Mar. 18, 2004
Nagai	6,720,103 B1	Apr. 13, 2004

Appellants' claimed invention is directed to a fuel cell assembly comprising first and second components separated by a gasket comprising first and second metal sheets. The gasket comprises a planar region having an opening for the passage of gas between the first and second components, and a pillow structure surrounding the opening and extending from the planar region. The pillow structure of the gasket defines an enclosed, gas-filled chamber with the first and second sheet metal, and the pillow structure is diffusion bonded to the first and second components of the fuel cell to form a sealed joint.

The appealed claims stand rejected under 35 U.S.C. § 103(a) as follows:

a) Claim 5 over Nagai in view of Wakamatsu,

b) Claim 5 over Nagai in view of JP '783,

c) Claim 5 over Nagai in view of Franklin,

d) Claims 6-7 over Nagai in view of Wakamatsu and JP '783, and

e) Claims 6-7 over Nagai in view of Wakamatsu and Inagaki.

We have thoroughly reviewed the respective positions advanced by Appellants and the Examiner. In so doing, we find ourselves in agreement with Appellants that the Examiner has failed to establish a prima facie case of obviousness for the claimed subject matter. Accordingly, we will not sustain the Examiner's rejections.

There is no dispute that Nagai discloses a fuel cell assembly comprising first and second components that are separated by a gasket comprising first and second resin sheets that are bonded together around a metal spacer 5a. As recognized by the Examiner, the gasket of Nagai is not formed by first and second sheet metal elements as presently claimed. Consequently, the Examiner cites Wakamatsu, JP '783 and Franklin as evidence for the obviousness of making the Nagai gasket from sheet metal rather than resin material. However, as pointed out by Appellants, metal spacer 5a of Nagai is an essential element for supporting the gasket, and Nagai, either alone or in combination with the other cited references, provides no teaching or suggestion of the concept of employing bonded metal sheets without a supporting spacer to form the claimed pillow structure. Although the Examiner points to the "comprising" language of the appealed claims which does not exclude the metal spacer of Nagai, the

claims encompass the disclosed embodiment wherein no spacer is used and the gas-filled pillow portion of Appellants' gasket provides "a gas spring that guarantees compliance and rebound of gasket 10 at any temperature and pressure" (p. 4 of Specification, ll. 29-30). None of the prior art references sets forth any teaching of this pillow concept which would have provided any suggestion for one of ordinary skill in the art to modify the resin gasket of Nagai to arrive at Appellants' metal gasket comprising the claimed pillow structure.

Also, Appellants accurately point out that the gasket of Nagai is not bonded to the first and second components, separators 2 and 3, let alone diffusion bonded, as presently claimed. The Examiner states that "Nagai discloses that in Figure 2 the inner edge parts 6a, 7a, and underformed[sic, undeformed] parts of the counterposed gasket sheets 6b-7b and 6c-7c are all welded together (COL 4, lines 40-53)" (p. 4 of Ans., penultimate para.). However, the bonding referred to in Nagai is the welding of the gasket's resin sheets together at their interface. This is not a disclosure of bonding the exterior surfaces of the gasket material to the surfaces of separators 2 and 3. The Examiner sets forth the same erroneous analysis at page 16 of the Answer by stating that "Nagai fully contemplates and directly teaches having his two gasket members 6-7 bonded together by welding" (second para.). While the Examiner goes on to state that "having gasket members 6-7 welded together is the same as having them bonded as welded is a well-known technique used in the bonding art to bond or join elements together," this is irrelevant to the claim requirement of having the first and second sheet metal elements of the gasket being diffusion bonded to the first and second components of the fuel cell.

In conclusion, based on the foregoing, we are constrained to reverse the Examiner's rejections.

REVERSED

ls/cam

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